FIG. 1

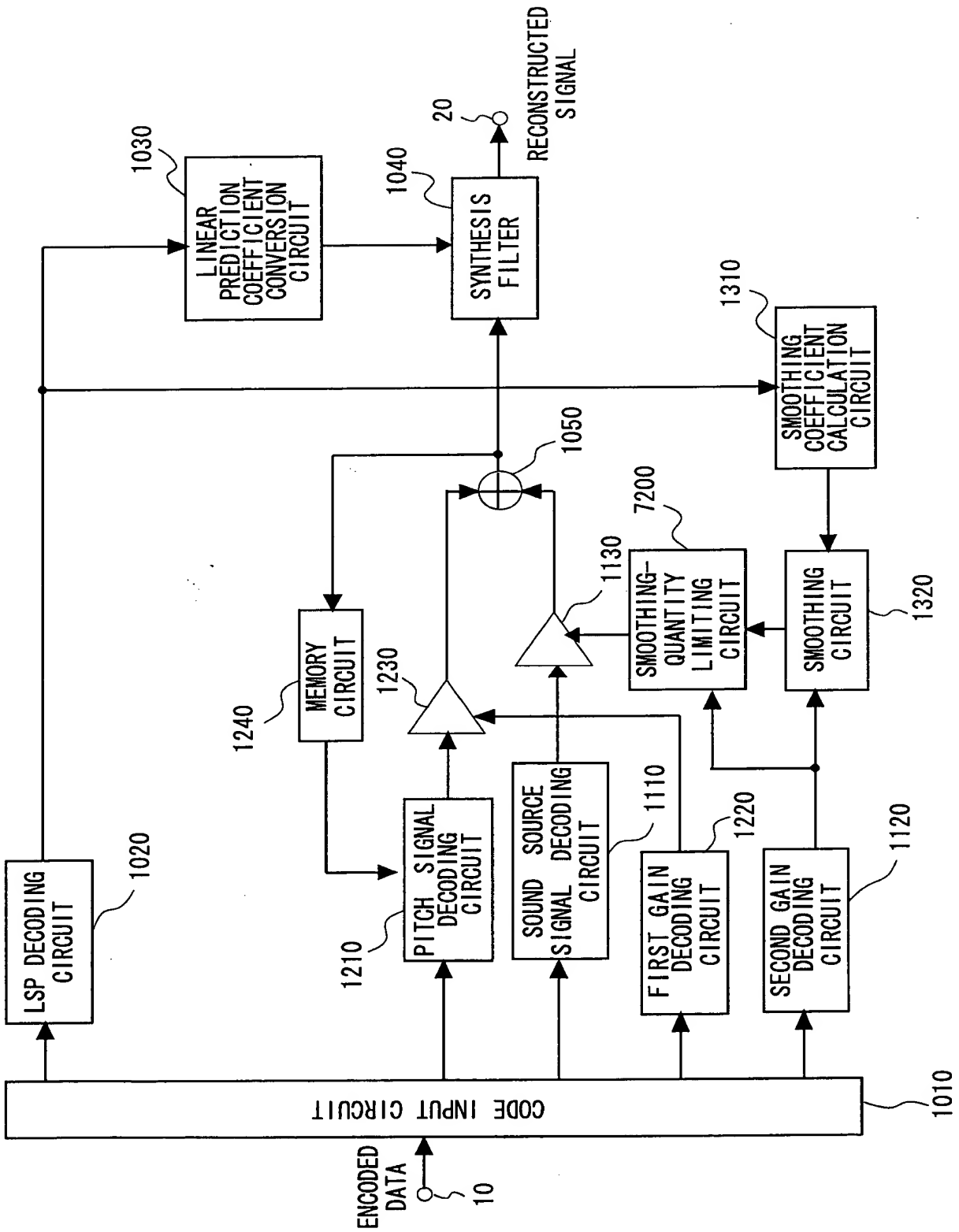
CODE INPUT CIRCUIT
1010
ENCODED DATA
10
LSP DECODING CIRCUIT
1020
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
MEMORY CIRCUIT
1240
1230
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
1130
SMOOTHING CIRCUIT
1320
SMOOTHING COEFFICIENT CALCULATION CIRCUIT
1310
1050
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL

FIG. 2

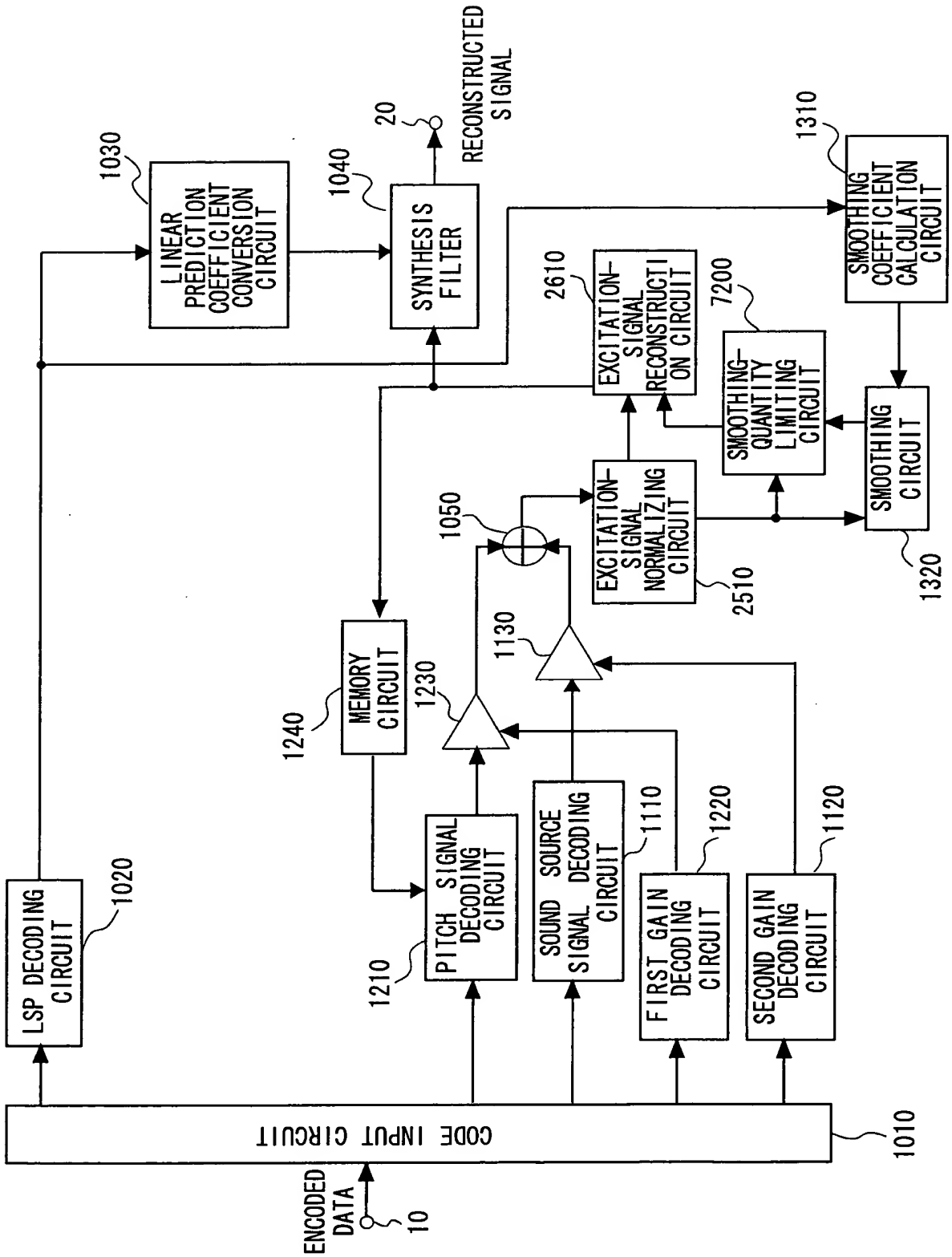
ENCODED DATA
10
CODE INPUT CIRCUIT
1010
LSP DECODING CIRCUIT
1020
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
MEMORY CIRCUIT
1240
1230
1130
1050
EXCITATION-SIGNAL NORMALIZING CIRCUIT
2510
EXCITATION-SIGNAL RECONSTRUCTION CIRCUIT
2610
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
SMOOTHING CIRCUIT
1320
SMOOTHING COEFFICIENT CALCULATION CIRCUIT
1310
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL

FIG. 3

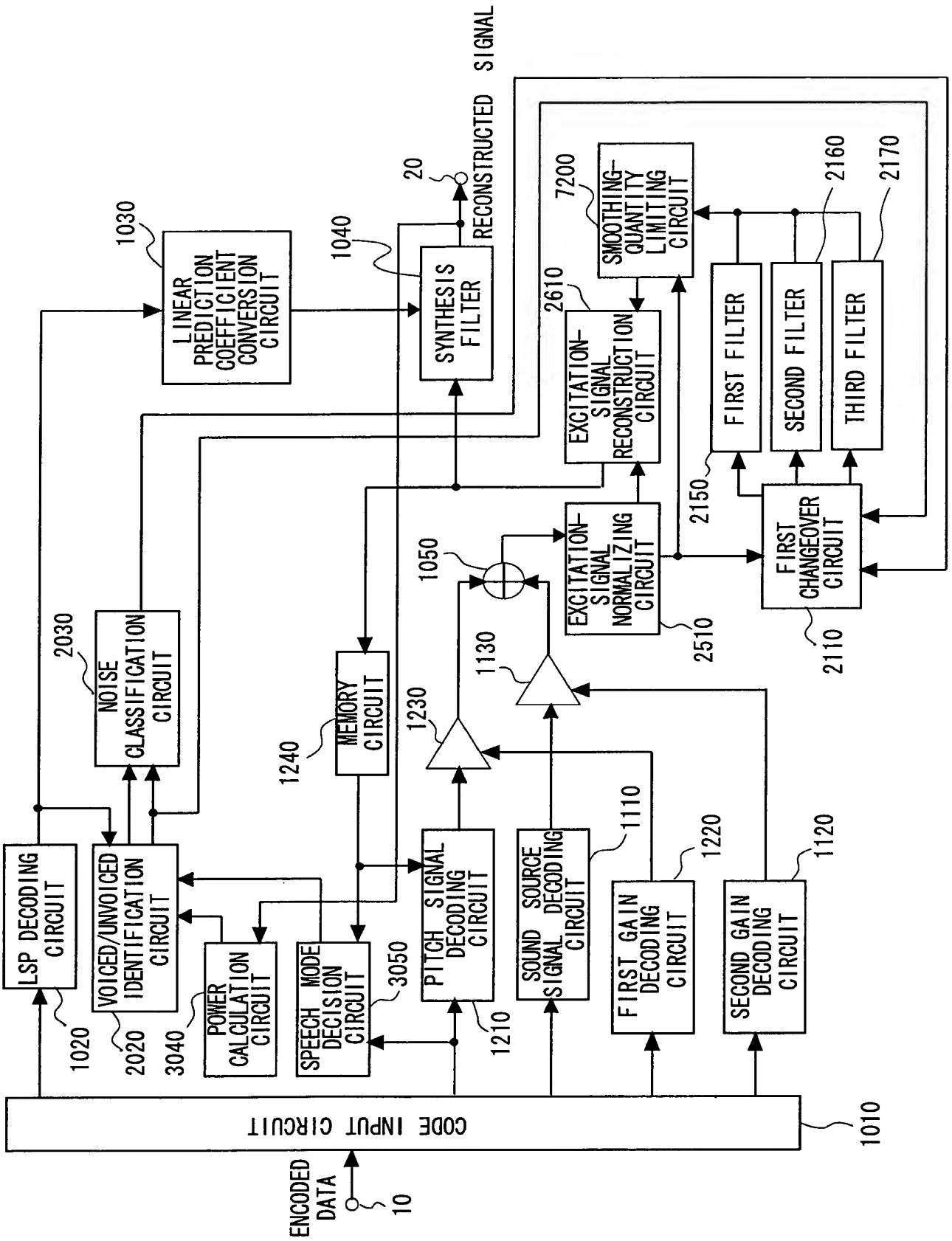
ENCODED DATA
10
CODE INPUT CIRCUIT
1010
LSP DECODING CIRCUIT
1020
VOICED/UNVOICED IDENTIFICATION CIRCUIT
2020
POWER CALCULATION CIRCUIT
3040
SPEECH MODE DECISION CIRCUIT
3050
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
NOISE CLASSIFICATION CIRCUIT
2030
MEMORY CIRCUIT
1240
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL
1050
1130
1230
EXCITATION-SIGNAL NORMALIZING CIRCUIT
2510
EXCITATION-SIGNAL RECONSTRUCTION CIRCUIT
2610
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
FIRST CHANGEOVER CIRCUIT
2110
2150
FIRST FILTER
SECOND FILTER
2160
THIRD FILTER
2170

FIG. 4

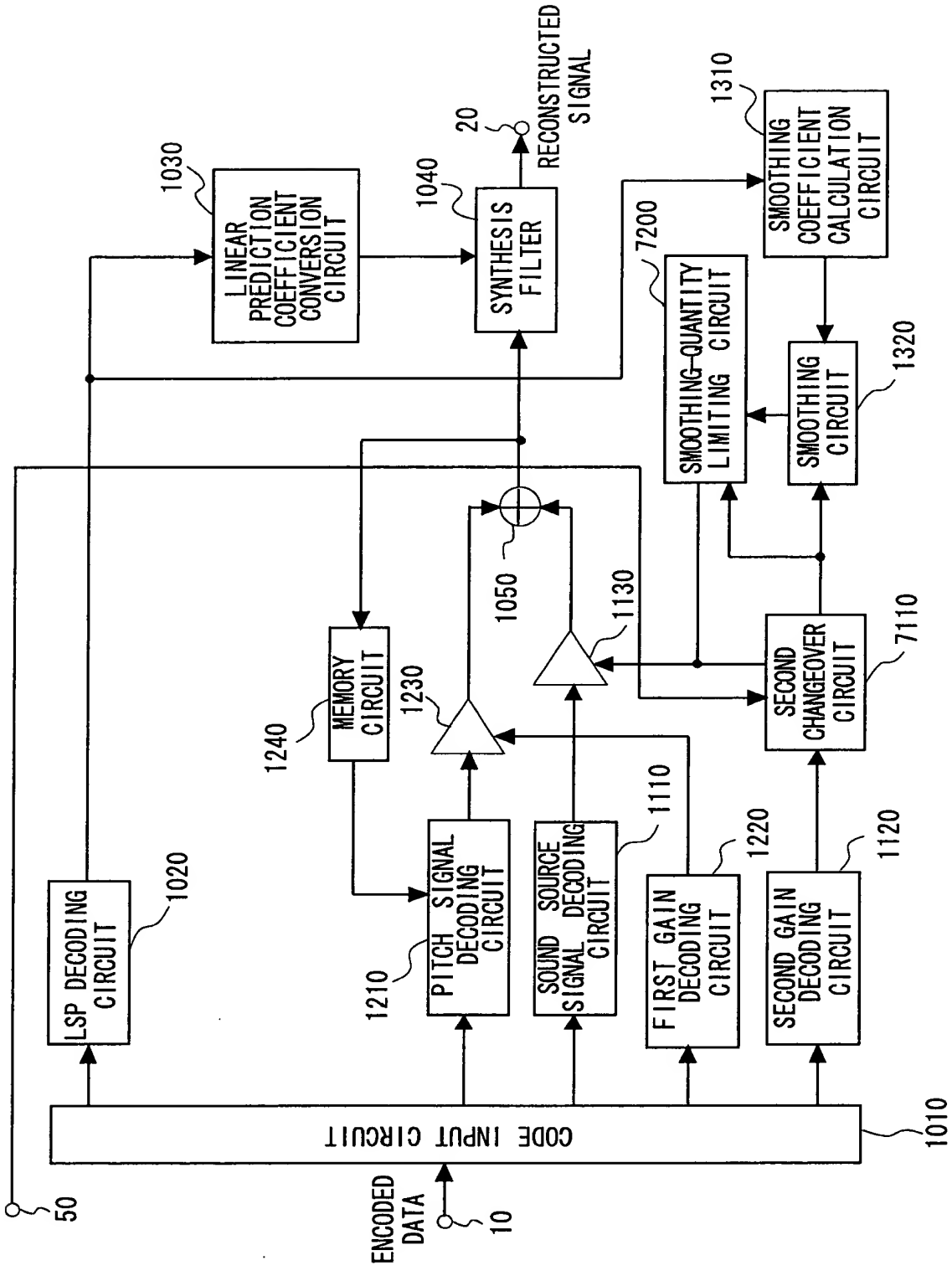
CODE INPUT CIRCUIT
1010
ENCODED DATA
10
50
LSP DECODING CIRCUIT
1020
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
MEMORY CIRCUIT
1240
1230
1050
1130
SECOND CHANGEOVER CIRCUIT
7110
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
SMOOTHING CIRCUIT
1320
SMOOTHING COEFFICIENT CALCULATION CIRCUIT
1310
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL

FIG. 5

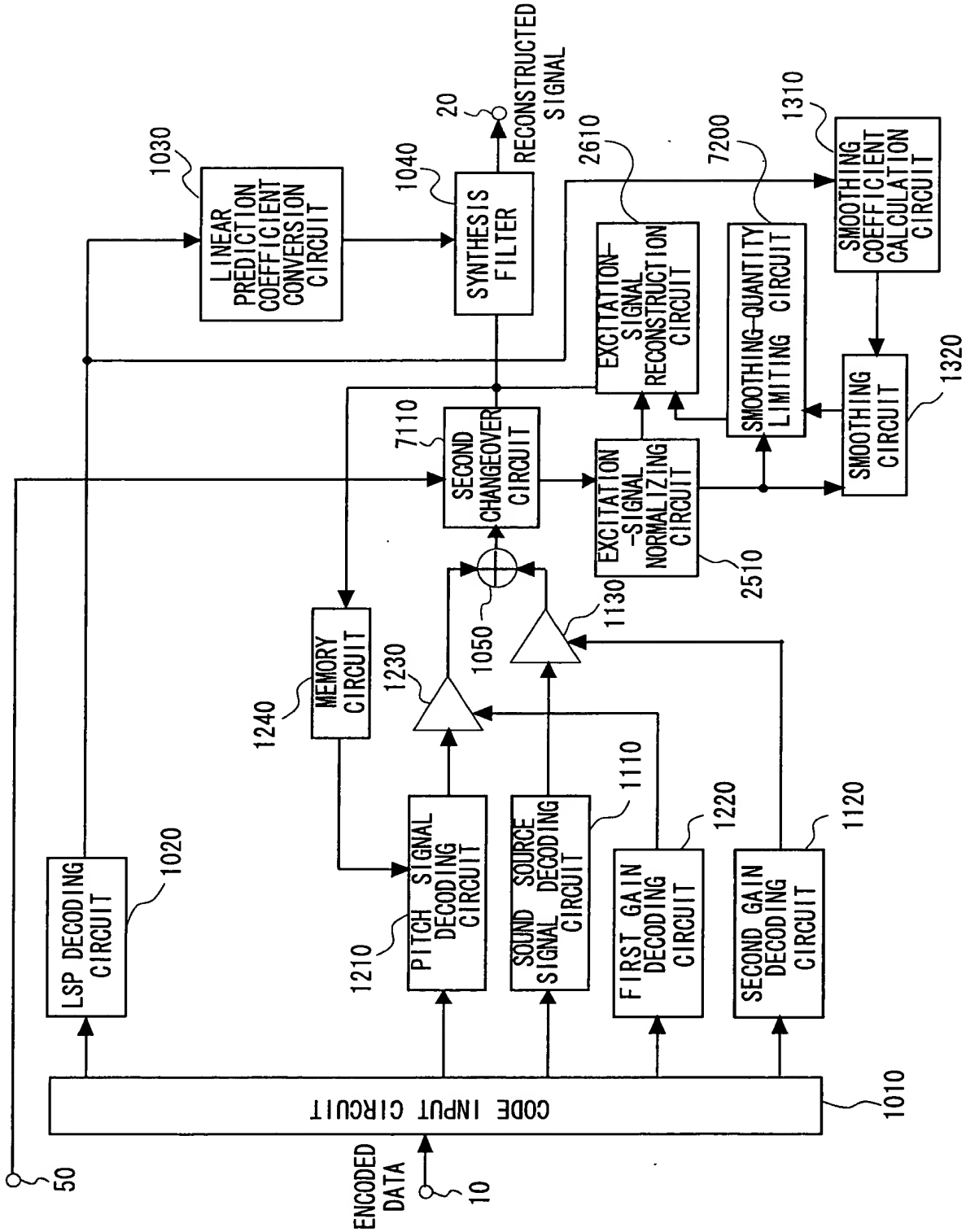
ENCODED DATA
10
50
CODE INPUT CIRCUIT
1010
LSP DECODING CIRCUIT
1020
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
MEMORY CIRCUIT
1240
1230
1050
1130
SECOND CHANGEOVER CIRCUIT
7110
EXCITATION -SIGNAL NORMALIZING CIRCUIT
2510
EXCITATION-SIGNAL RECONSTRUCTION CIRCUIT
2610
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
SMOOTHING CIRCUIT
1320
SMOOTHING COEFFICIENT CALCULATION CIRCUIT
1310
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL

FIG. 6

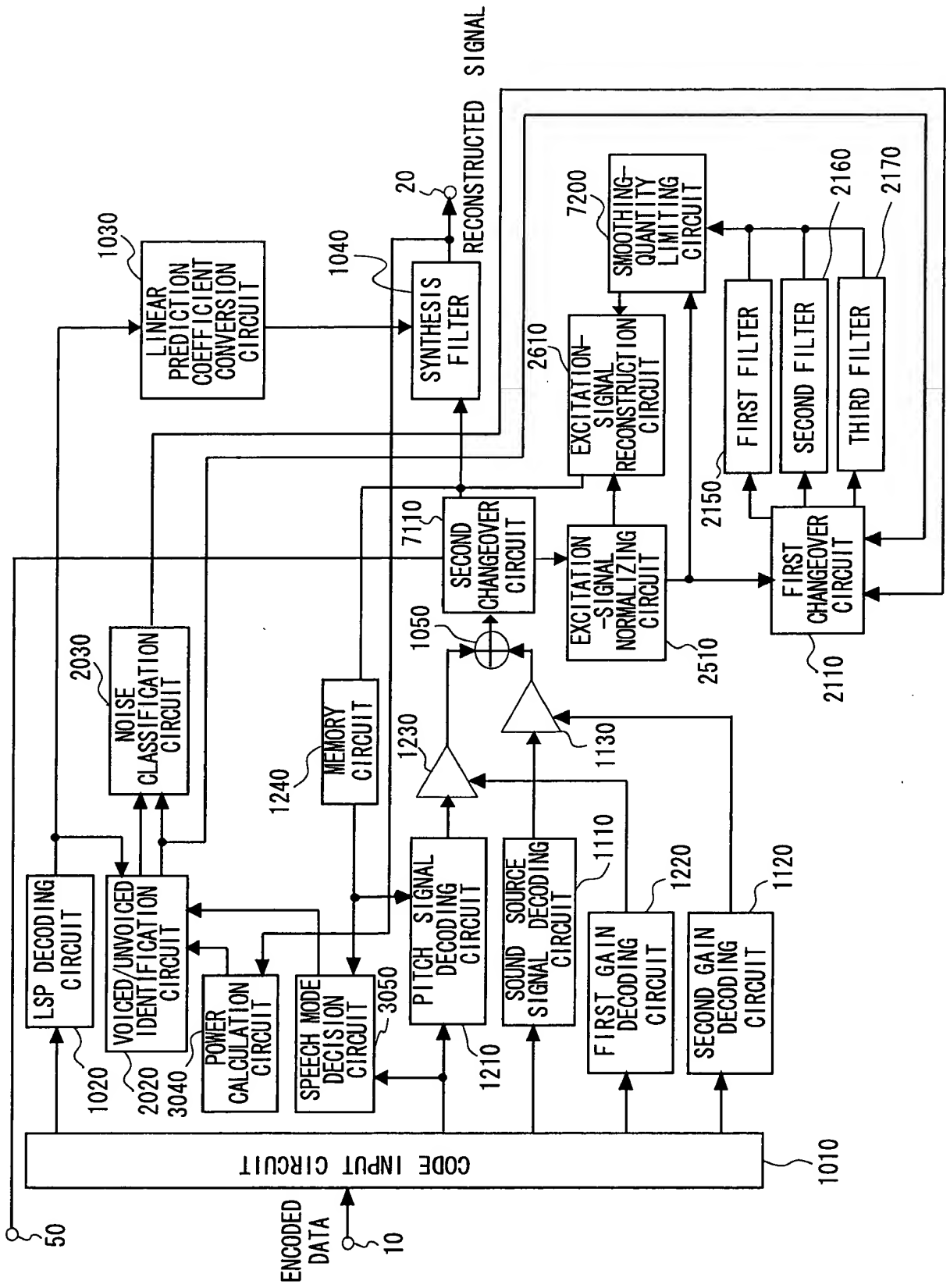
CODE INPUT CIRCUIT
1010
ENCODED DATA
10
50
LSP DECODING CIRCUIT
1020
VOICED/UNVOICED IDENTIFICATION CIRCUIT
2020
POWER CALCULATION CIRCUIT
3040
SPEECH MODE DECISION CIRCUIT
3050
NOISE CLASSIFICATION CIRCUIT
2030
LINEAR PREDICTION COEFFICIENT CONVERSION CIRCUIT
1030
MEMORY CIRCUIT
1240
PITCH SIGNAL DECODING CIRCUIT
1210
SOUND SOURCE SIGNAL DECODING CIRCUIT
1110
FIRST GAIN DECODING CIRCUIT
1220
SECOND GAIN DECODING CIRCUIT
1120
1230
1130
1050
SECOND CHANGEOVER CIRCUIT
7110
SYNTHESIS FILTER
1040
20
RECONSTRUCTED SIGNAL
EXCITATION-SIGNAL NORMALIZING CIRCUIT
2510
EXCITATION-SIGNAL RECONSTRUCTION CIRCUIT
2610
SMOOTHING-QUANTITY LIMITING CIRCUIT
7200
FIRST CHANGEOVER CIRCUIT
2110
2150
FIRST FILTER
SECOND FILTER
2160
THIRD FILTER
2170

FIG . 7

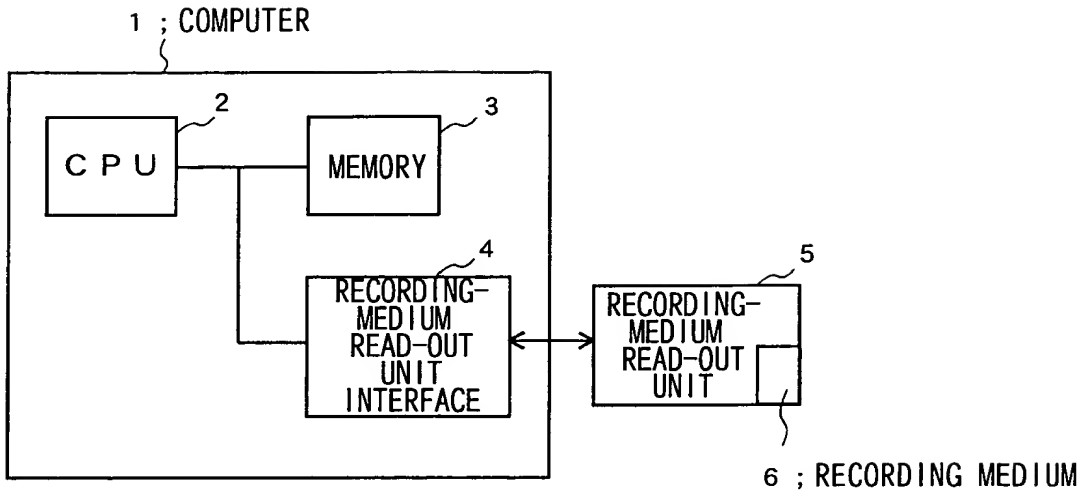

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FIG. 8

PRIOR ART

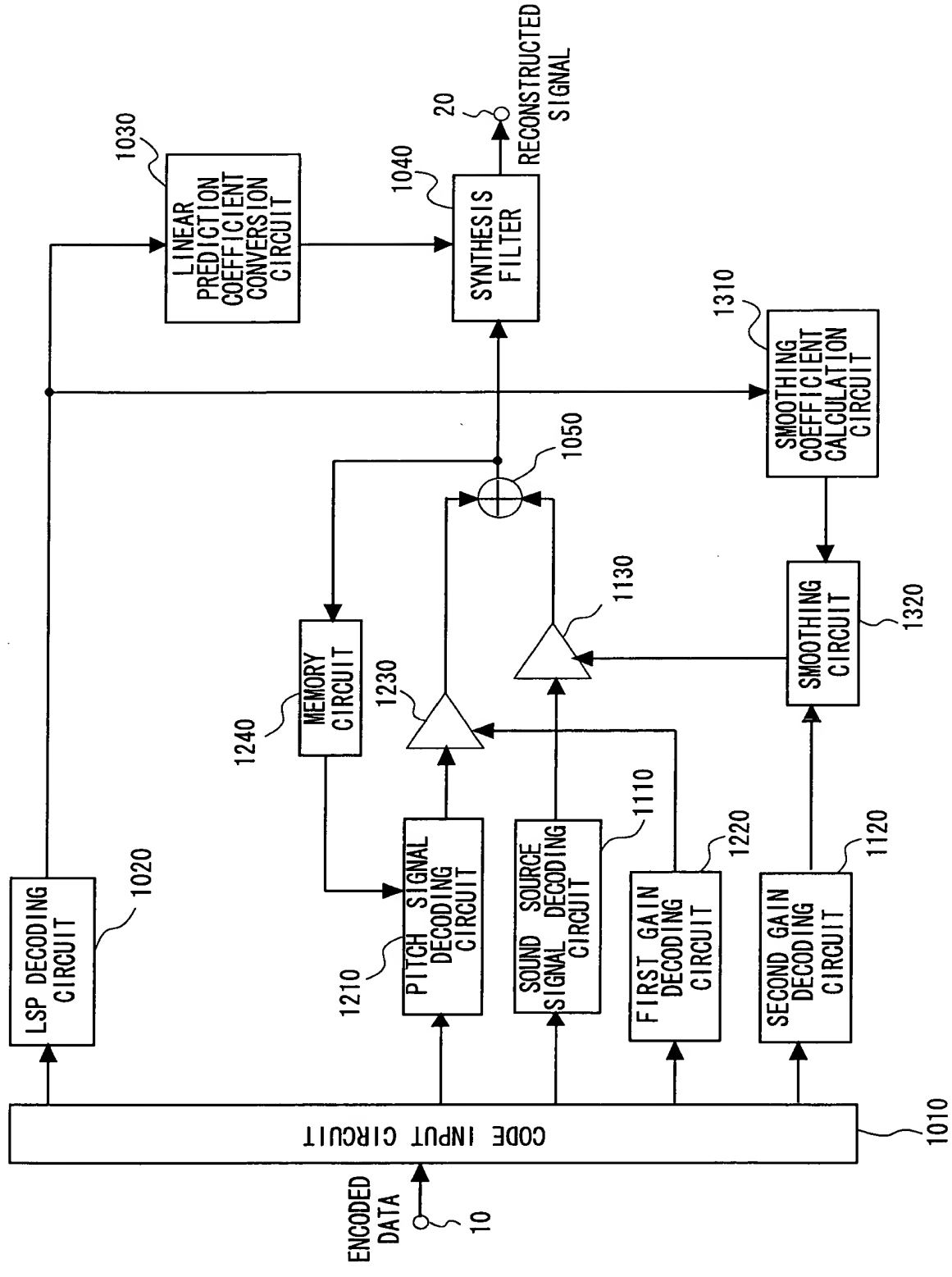
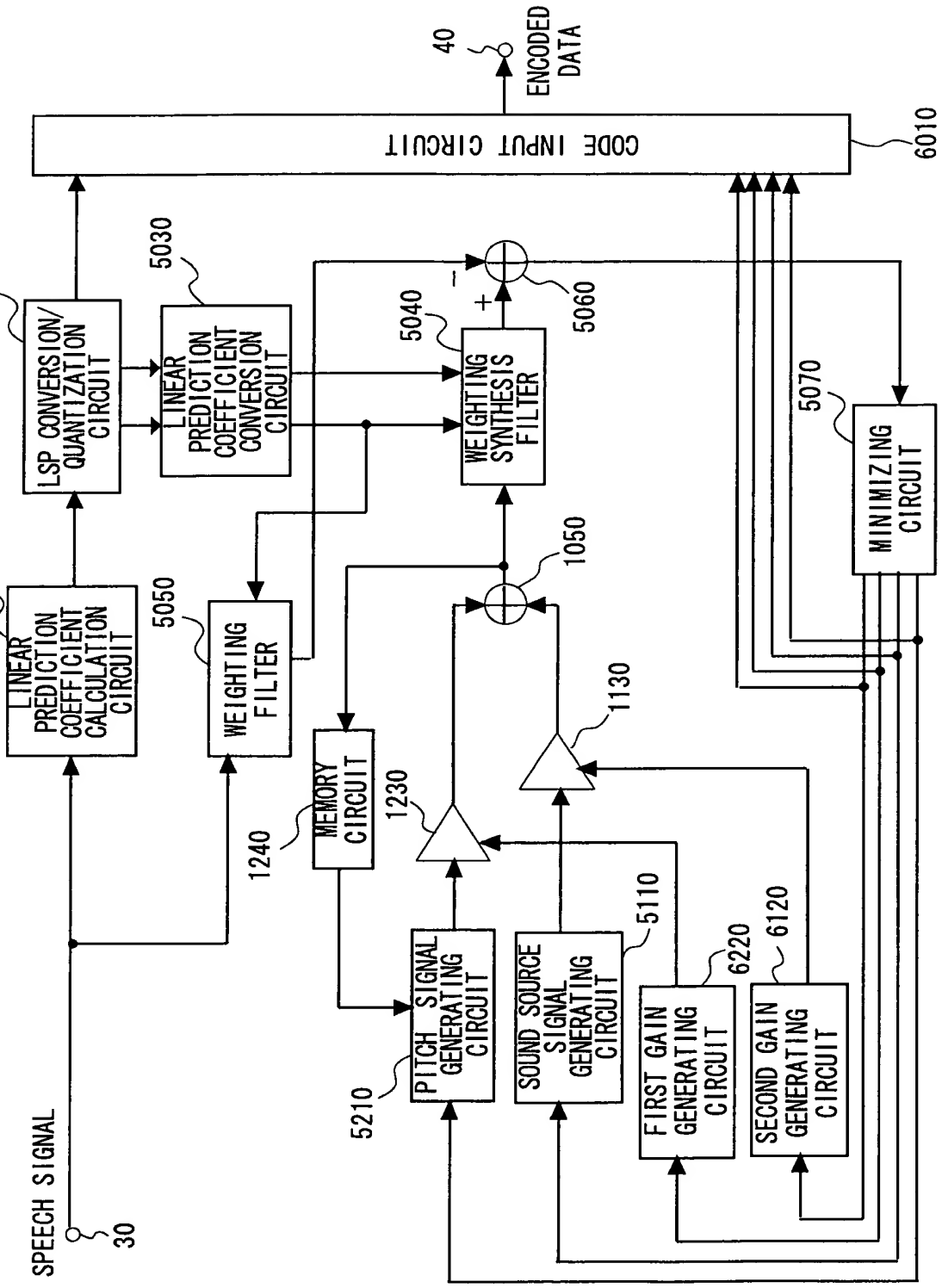
FIG. 9 PRIOR ART